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THE EFFECTS OF STATING LEVEL OF
ASPIRATION ACCORDING TO HOPE, EXPECT,
AND ENCOURAGEMENT INSTRUCTIONS UPON
PERFORMANCE OF A MOTOR TASK

by



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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF ARTS

DEPARTMENT OF PHYSICAL EDUCATION

EDMONTON, ALBERTA

SPRING, 1970

1970
49

UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Effects of Stating Level of Aspiration According to Hope, Expect, and Encouragement Instructions upon Performance of a Motor Task," submitted by Donald William Hunter in partial fulfilment of the requirements for the degree of Master of Arts.

ABSTRACT

The purpose of this study was to determine the effects which explicitly stating a level of aspiration has upon subsequent performance of a selected motor task. To this end, four hypothesis were formulated and tested:

1. The mean performance scores of the groups which state a level of aspiration will be significantly greater than the control group which has knowledge of results alone.
2. The mean performance scores of the groups receiving expect and encouragement instructions will be significantly greater than the mean performance scores of the group receiving hope instructions.
3. The mean goal discrepancy scores of the groups exposed to hope and encouragement instructions will be significantly greater than the mean goal discrepancy scores of the group exposed to expect instructions.
4. The levels of aspiration set by those groups receiving hope and encouragement instructions will be influenced less by subsequent task performance than the levels of aspiration set by the group receiving expect instructions.

The seventy-two male high school subjects were randomly assigned to four equal groups designated as A. Hope, B. Encouragement, C. Expect, and D. Control. The subjects were assigned to two tests on a testing schedule designed to

equalize the testing time slots between groups.

Each subject was given a pre-test of the one minute speed sit-up test after being told that the tests were part of a survey on the group. The sit-up test was utilized because it was felt that motivational effects would be most operant in tasks which called for an intense and a sustained effort.

Two days after the pre-test, the subjects were again tested in the same time slot. Before performing again, the subjects in the Hope, Encouragement, and Expect Groups were informed of their previous score and were asked to set a level of aspiration according to the instruction prescribed for the group. Subjects in the Control Group were also informed of their score, but they did not set a level of aspiration before performing the task.

An analysis of the data supported the first hypothesis. Subjects in the three groups which set a level of aspiration performed significantly better in the post-test than on the pre-test, while the control group did not make any significant improvement.

Analysis of the data failed to support the second and the third hypothesis. The trends in re-setting level of aspiration following subsequent performance generally supported the fourth hypothesis.

ACKNOWLEDGEMENTS

I would like to express my thanks to my chairman, Dr. R. B. Alderman, and the other members of my committee, Professor W. A. Meloff, and Professor A. F. Affleck for their assistance and guidance in the planning and preparation of this thesis.

Special thanks go to Mr. S. B. Glenesk, Community Recreation Branch, Manitoba Department of Tourism and Recreation, and to the students who attended the Gimli Provincial Leadership Training Camp for their cooperation during the testing for this study.

Finally, I would like to thank my wife Ann who allowed me to spend a portion of our honeymoon in the writing of this thesis.

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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

Research in the construct, level of aspiration, began in 1930 with a study by Dembo (10). Along with other early investigators, Dembo considered level of aspiration to be the goals, expectations, or personal demands which an individual associates with a subsequent performance at a specific task.

The standard technique for measuring level of aspiration was developed by Frank (15) in 1935. Frank asked his subjects to explicitly state "how well they intended to do" on a subsequent performance. Although the type of statement used to derive a level of aspiration varied from study to study, the level of aspiration was usually obtained within a typical sequence of events.

- (1) A task is performed.

- (2) With knowledge of past results, a level of aspiration is set.

- (3) The task is performed again.

- (4) The level of aspiration is re-set in order that some measure of psychological feelings of success or failure may be obtained.

These early investigations considered feelings of success and failure to be related to attainment or non-attainment of personal goals rather than externally set standards. The physical educator and athletic coach are constantly dealing with people who participate in an activity, evaluate their own performance, re-participate and then re-evaluate. The construct, level of aspiration, is thus an important one; it can lead to an understanding of personal feelings of success and failure and the relation between these feelings and future levels of participation and performance.

It has become evident to physical educators and athletic coaches that a physical performance is not wholly dependent upon skill level and physical fitness. The extent to which an individual applies himself to a task depends on a number of psychological factors. This study will investigate whether setting a level of aspiration has a motivational effect upon a specific performance.

The Problem

The purposes of this study are:

- A. To determine the effects which explicitly stating a level of aspiration has upon subsequent performance of a selected motor task.
- B. To test the following hypotheses:
 - 1. The mean performance scores of the groups which state a level of aspiration will be significantly greater than the control group which has knowledge of results alone.

2. The mean performance scores of the groups receiving "expect" and "encouragement" instructions will be significantly greater than the mean performance scores of the group receiving "hope" instructions.
3. The mean goal discrepancy scores of the groups exposed to "hope" and "encouragement" instructions will be significantly greater than the mean goal discrepancy scores of the group exposed to "expect" instructions.
4. The levels of aspiration set by those groups receiving "hope" and "encouragement" instructions will be influenced less by subsequent task performance than the levels of aspiration set by the group receiving "expect" instructions.

Need for the Study

A major goal of most athletic coaches is to derive optimum performances from the athlete. Similarly, the physical educator is concerned with the student's motivation to learn and perform in the physical education class. To these ends, coaches and educators have sometimes employed various motivating techniques which involve the setting of and working toward goals. It has not been established whether goal setting is effective, what types of goals are effective, and what the physical and psychological implications of goal setting for the performer's welfare might be.

A level of aspiration is the personal expectations, goals, or self-demands which an individual associates with a subsequent performance at a specific task. Personal feelings of success and failure are considered to be related to the attainment or non-attainment of the level of aspiration.

There is a need in Physical Education for a more systematic understanding of the nature of goals and goal

setting behavior. Perhaps of greatest importance would be a knowledge of the motivational effect which stating a goal might have upon performance.

Knowledge of the effectiveness of goal setting as a motivational technique is dependent upon an understanding of the various types of goals and the implications which goal setting has in terms of psychological feelings of success and failure.

In recent years, there have been increasing attempts by physical educators to apply the theories of sociology, social-psychology, and various other sub-fields of psychology to physical education settings. A new sub-discipline, variously called Sociology of Sport, Psychology of Sport, or Social Psychology of Sport and Physical Education is developing rapidly. The construct, level of aspiration, would be a construct of considerable importance to this new area of Physical Education.

Delimitations

1. The study was limited to seventy-two male high school students attending the Gimli Provincial Leadership Training Camp in July, 1969.
2. The study was limited to a single selected motor task: the C.A.H.P.E.R. one-minute speed sit-up test.

Limitations

The study was limited by the ability of the experimenter to keep the referent social power relationship between

experimenter and subject constant for all subjects in all groups.

Definition of Terms

Level of Aspiration. Level of aspiration is operationally defined as the level of future performance which an individual explicitly undertakes to reach in a familiar task.

Goal Discrepancy Score. The goal discrepancy score is the difference between the level of aspiration set and the level of performance which preceeded it.

Attainment Discrepancy Score. The attainment discrepancy score is the difference between the level of subsequent performance and the level of aspiration set for that performance.

Ideal Goal. The ideal goal is the ultimate performance level which the individual hopes to possibly reach sometime in the future.

Action Goal. The action goal is the goal which the individual holds for a specific subsequent performance; that is, the performance level which the individual feels he is capable of reaching at the present.

Instruction. An instruction is operationally defined as the statement used by the experimenter to obtain a level of aspiration from the subject.

Referent Social Power. Referent social power is the power the experimenter holds over the subject because of the subject's desire to be like the experimenter.

CHAPTER II

REVIEW OF THE LITERATURE

I. INTRODUCTION AND BASIC CONCEPTS

The term level of aspiration was first used by Dembo (10) in 1930 to describe the goal setting behavior of her subjects in a study examining the dynamics of anger. Dembo postulated that the satisfaction or dissatisfaction associated with a performance was related to the subjects' personal level of aspiration for that task performance. Using Dembo's theoretical assumptions, Hoppe (29) conducted the first empirical study, employing the spontaneous remarks of the subjects to determine feelings of success or failure after a task performance.

These two early studies, although very qualitative in their approach, were the first empirical attempts to describe and explain the nature of goals and goal-setting behavior. These investigators considered an individual's level of aspiration to be the goals, expectations, or personal demands which that individual associates with a subsequent performance at a specific task. While Hoppe failed to clearly distinguish between implicit and explicit goals, he did differentiate between momentary and ideal goals. This differentiation led to other investigations

considering goals as phenomena which possesses an inner psychological structure. Success and failure were now understood as feelings aroused by attainment or non-attainment of personal goals rather than externally set standards.

A Typical Sequence: The standard technique for measuring level of aspiration was originated by Frank (15) in 1935, although Hausman (24) had earlier asked subjects to make "bids" on their future performance. Frank's technique was to ask subjects to explicitly state "how well they intended to do" on a subsequent performance after being told how well they did on the previous performance. The use of this technique led Frank to operationally define level of aspiration as, "The level of future performance in a familiar task which an individual, knowing the level of past performance in that task, explicitly undertakes to reach".

This measurement technique provided a frame of reference for subsequent investigations of level of aspiration; level of aspiration was now defined in terms of a typical sequence of events.

- (1) A task is performed.
- (2) With knowledge of past results (step (1)), a level of aspiration is set.
- (3) The task is performed again.
- (4) Psychological feelings of success or failure result from the subsequent performance as it relates to level of aspiration.

Briefly, a subject would perform a task and then

make some type of statement about the level of their next performance--the level of aspiration. The subject would then perform the task again following which he would be asked to reset the level of aspiration; this resetting was intended to represent feelings of success and failure.

Ideal Goal--Action Goal: According to Lewin (37), the level of aspiration presupposes a goal which has an inner structure consisting of an ideal goal and an action goal. The ideal goal is the ultimate goal the individual hopes to attain sometime in the future. The action goal is the momentary goal the individual tries for because of the present unobtainability of the ideal goal. Level of aspiration is usually considered to be the action goal.

Frank (15) stated that level of aspiration was influenced by the relative strengths of three needs. These are:

(1) The need to make level of aspiration approximate the level of future performance as closely as possible.

(2) The need to keep the level of aspiration as high as possible regardless of past performance.

(3) The need to avoid failure.

Later, Frank (17) simplified these theoretical, almost ad hoc, assumptions stating that level of aspiration represents a compromise between the subject's evaluation of his ability and his desire to do well. He added that stating a level of aspiration was usually a psychological threat to that person's self-esteem because of the open commitment

made to an expectation of future performance.

Heckhausen (26) states that it is customary to understand level of aspiration as the defined absolute level of the goal pursued in performing a given task.

Discrepancy Scores: Two types of discrepancy scores are commonly employed in level of aspiration studies. The "goal" discrepancy score refers to the difference between the level of aspiration set and the level of the performance preceding it. A positive goal discrepancy or "D" score represents a level of aspiration which is higher than the level of previous performance.

The "attainment" discrepancy score is the difference between level of aspiration and the level of subsequent performance. A person was considered to have succeeded if the level of subsequent performance surpassed the level of aspiration set.

Summary: According to Rotter (47) the studies in level of aspiration up until 1942 could be placed into three general categories as follows:

(1) Studies which used the standard technique to determine principles applicable to theories of personality.

(2) Studies which were interested in the validity, reliability, and generality of the technique itself.

(3) Studies which accepted the technique as valid and used it to study other variables.

A central methodological problem of studies

employing the standard technique of measuring level of aspiration was whether the verbal goal and the true goal were identical. The issue was clouded by the presence of unclear instructions and other uncontrolled variables in many studies which might effect the extent to which a subject would verbalize his true goal.

A second methodological problem was that the size of the goal units and the nature of the task situation employed in a study also had an effect on the results. Many of the conflicting results of early studies were explained only after a later, more controlled study. For example, Frank (16) found that tasks which have known performance limits are more likely to produce feelings of failure when level of aspiration is not achieved.

In summary, level of aspiration is the goal, expectation, or self-demands which an individual associates with a performance at a specific task; it presupposes a goal with an inner structure.

II. INITIAL SETTING AND KNOWLEDGE OF RESULTS

Initial Setting: A common finding of most of the early studies in level of aspiration was that subjects generally set their initial level of aspiration slightly higher than the level of their previous performance. Lewin (37) states that this finding is consistent with the typical positive attitude toward achievement existing in Western cultures.

Sears (48), Robinson (45), and Atkinson (2) add

that successful, confident, and well adjusted subjects are more likely to make this typical response than subjects who are not. Sears found that academically successful children tended to set levels of aspiration slightly higher than the levels of previous performance while unsuccessful children tended to set either an overly high or an overly low level of aspiration.

Both Robinson (45) and Atkinson (2) found that highly motivated persons, those with a high need for achievement (n_{ach}), set moderate, realistic levels of aspiration. Conversely, those subjects who possessed a high fear of failure often set levels of aspiration so low that they could not possibly fail or so high that success was highly unlikely. Atkinson points out subjects who set either overly high or overly low levels of aspiration are in both cases protecting themselves from feelings of failure. Failing to reach an impossible goal would not be subjectively considered a failure. By choosing a realistic goal, these subjects would expose themselves to the risk of failure.

Knowledge of Results: A number of investigators were concerned with the psychological effects which attainment or non-attainment of level of aspiration on a subsequent performance had upon the performer.

Jucknat (34) found that failure to reach level of aspiration on a subsequent performance generally resulted in a lowering of the level of aspiration for the next performance. The most typical reaction to success was a moderate

rise in level of aspiration. Festinger (13) found that following success, 51 per cent of his subjects raised their level of aspiration, 41 per cent stayed on the same level, and 8 per cent shifted downward. After failure, 64 per cent lowered their level of aspiration, 29 per cent stayed on the same level and only 7 per cent raised their level of aspiration. While these percentages can hardly be considered standards, they do indicate the typical direction of the shifts following success or failure as well as the variation in that shifting.

Klugman (36) found that repeated failures reinforced the tendency to lower level of aspiration following non-attainment. This tendency was also reported by Pennington (42) who studied the effects which passing or failing grades in the college classroom had upon level of aspiration. Pennington, Gardner (19), Anderson and Brandt (1), Hilgard, Sait and Margaret (28), among others all found that success produced an upward, although sometimes modest, swing in level of aspiration.

A number of conflicting results were explained by Child and Whitney (7) in their study. After experimentally ruling out a number of variables which had confounded the results of earlier studies, they found that:

- (1) Success generally leads to a raising of the level of aspiration and failure to a lowering.

- (2) Failure is more likely to lead to withdrawal in the form of avoidance of the level of aspiration situation.

Sears (49) for example found that subjects would attempt to avoid stating a level of aspiration when they were failing.

(3) Effects of failure on level of aspiration are more varied than the effects of success.

(4) The stronger the success the greater the probability of a rise in level of aspiration; the stronger the failure, the greater the probability of a lowering of level of aspiration.

Moulton (41) adds that this typical shift did not occur as frequently in avoidance oriented subjects or in those individuals with a high fear of failure. These individuals were more likely to disregard the performance level and continue to set either an overly high or overly low level of aspiration. A number of these avoidance oriented subjects lowered levels of aspiration following success.

In general, however, most individuals follow what Heckhausen (26) calls "The Laws of Shifting". Individuals will typically raise the level of aspiration after a success and lower it after a failure.

III. VALENCE THEORY AND PROBABILITY OF SUCCESS

Rosenfeld (46) has defined level of aspiration as the level of difficulty of a goal selected by a subject. Clearly, the setting of a level of aspiration may be viewed as a choice situation. The individual is asked to state, according to some type of instruction, how difficult a level of performance he will attempt to reach.

Lewin (37) states that the choice with the highest

valence is one where the sum of attractiveness minus the sum of disagreeableness associated with that choice is at a maximum.

Hence, the valence of any choice (V_n) equals the valence of success (V_{aSuc}) minus the valence of failure (V_{aFai}). Since the valence of failure carries a negative sign, the formula is written as:

$$V_n = V_{aSuc} + V_{aFai}$$

This formula is applicable only within a crucial range of difficulty which excludes choices which the individual considers to be too easy or too difficult.

The valence of any level of difficulty is influenced not only by the attractiveness of the choice, but also by the subjective probability of success associated with the choice. The subjective probability of success (SP_{su}) ranges from 0 to 100 per cent with a high probability of success denoting an easy task. For example, a SP_{su} of .90 would be attached to a very easy task while a task with an SP_{su} of .50 is one which the individual feels he has an equal chance of succeeding or failing at. It is assumed that the subjective probability of success (SP_{su}) plus the subjective probability of failure (SP_F) equals unity. A choice with an SP_{su} of .70 would therefore have an SP_F of .30.

The subjective probability of success, according to Deutch and Kraus (11), is influenced by past experiences with the task. The SP_{su} is also influenced by the trends

involved in past performances, especially the last performance at the task.

The valence of any level of difficulty now becomes:

$$V_n = (Va_{Suc} \cdot SP_{su}) - (Va_{Fai} \cdot SP_F)$$

The level of aspiration is taken as the level of difficulty that has the highest possible valence.

Atkinson and Feather (3) state that motivation is influenced by the following three variables:

- (1) Motive or energizing drive.
- (2) Expectancy or cognitive anticipation.
- (3) Incentive or relative attractiveness.

Hence: $MOTIVATION = F(MOTIVE \cdot EXPECTANCY \cdot INCENTIVE)$

Expectancy and subjective probability of success are synonymous and the incentive value of success (I_s) equals unity minus the subjective probability of success. For example, a relatively easy task might have a SP_{su} of .90. The incentive value of this task I_s would then be .10. The easier the task, the lower the incentive value associated with it.

The motivation to approach success MOT_{suc} is:

$$MOT_{suc} = M_s \cdot SP_{su} \cdot I_s$$

From this formula, it is evident that the motivation to achieve is strongest when the uncertainty regarding the outcome is greatest; that is, the subjective probability of success is .50.

The level of aspiration set should have a SP_{su} of .50 because the valence of this choice would be at a maximum for individuals with strong achievement motive. Persons with a strong motive to avoid failure would select either the easiest of alternatives or the most difficult.

The initial level of aspiration set by individuals with a strong achievement motive would normally have a SP_{su} of .50. If the person succeeds then the SP_{su} associated with that task rises and the person would choose a more difficult level with a SP_{su} of .50 attached to it. If the person fails, the SP_{su} of .50 associated with the initial level of aspiration would decrease and a SP_{su} of .50 would now be associated with an easier alternative.

Summary: The valence theories of Lewin (37) and Atkinson and Feather (3) are attempts to quantify the analysis of the inner psychological structure of goals. The construct, subjective probability of success, is useful in the explanation of initial setting of level of aspiration and shifts in level of aspiration after success or failure.

Diggory and Morlock (12) caution that the level of aspiration is a valid index of a subject's feelings of success and failure only when that subject is free to change the goal. If the goal is set, then the subjective probability of success is a better test of feelings of success and failure.

IV. GENERALITY AND INDIVIDUAL DIFFERENCES

Generality: The findings of Atkinson and Feather (3) would

suggest that the level of aspiration set by an individual is influenced by such basic personality variables as the need for achievement and the fear of failure. At the same time, a fairly specific subjective probability of success is attached to each difficulty level of a specific task.

The generality of the level of aspiration is the extent to which an individual will react similarly in the setting of level of aspiration for different tasks. The problem of generality is one of determining whether certain personality factors play a common and significant role in the setting of level of aspiration in different tasks.

Typically, generality of the level of aspiration is measured by correlating the goal discrepancy scores of two independent tasks. Any measure of correlation greater than zero was considered to be an indication that generality was operative.

Gould (22) correlated the goal discrepancy scores of six tasks including mathematical, word, and motor performance tests, and obtained correlation coefficients ranging from .04 to .60.

Heathers (25) found that the generality coefficient between two tasks was influenced by the similarity of the tasks. A correlation of .87 was obtained between tasks which had similar units of performance and similar performance curves. The correlation between tasks which had similar units of performance but dissimilar performance curves was only .67.

In summary, a review of the studies concerned with generality indicate that both generality and specificity operate when level of aspiration is set. A number of personality variables may influence an individual to set consistently high, low, or moderate levels of aspiration. At the same time, past experiences with a specific task will effect the level of aspiration set. An individual can hence set high levels in most activities as well as a low level of aspiration in a specific activity which he has failed in. Several authors also suggest that the discrepancy score is a poor measure to correlate the generality between two tasks.

A number of authors have attempted to correlate the level of aspiration with certain personality variables. Gardner (19), for example, found positive correlations between level of aspiration and (a) dissatisfaction with status, (b) importance attached to achievement, and (c) motivation.

Results of these studies were most fruitful when the subjects were divided into groups on the basis of high, low, medium, or negative discrepancy scores. It is outside of the main interests of this study to include an elaboration of these studies.

V. SITUATIONAL VARIABLES

Reference Groups: A number of studies have investigated the effects which the knowledge of the performance scores of others has upon the level of aspiration set.

Chapman and Volkman (6) gave a vocabulary test with a possible score range of 0-36 to their subjects. Half of the subjects were told that a group of people with I.Q. scores of 170 had scored 18 and the other half of the subjects were told that an I.Q. group of 80 had averaged 18. The subjects were then asked to set a level of aspiration for the test. Subjects with the superior reference group set an average level of aspiration of 14.5 while subjects exposed to the knowledge of the inferior reference group scores set an average level of aspiration of 27.2. Gelinsky (21) expanded Chapman and Volkman's study by exposing subjects to the scores of reference groups between the I.Q.'s of 80 and 170 and found that level of aspiration is significantly related to the degree of perceived difference between self and comparison groups.

Festinger (13) gave a synonym test to a group of undergraduate students. After being told his score, the subject was then informed of the average performance score of one of three groups: (a) high school students, (b) college freshmen, and (3) graduate students. Subjects who scored poorer than the high school students raised their estimates while students who scored better than graduate students actually lowered their level of aspiration.

McIntosh (39) also found that Caucasian subjects would raise their levels of aspiration if they were told that they were performing below or at the hypothetical performance level of negroes.

In general, subjects will raise their level of aspiration if they are performing below the average score of a reference group they consider inferior and will lower their level of aspiration if they are performing better than a group whom they consider to be superior. Knowledge of the scores of others serve as a frame of reference for the setting of level of aspiration.

A number of studies have found that knowledge of the standards of one's own group has a normative effect upon the level of aspiration set. Hertzman and Festinger (27) gave synonym and information tests to twenty male college students and asked these students to estimate their own performance. The vast majority of subjects had positive discrepancy scores. In a second session they informed the subjects of the mean performance and mean estimate scores of a fictitious group of fifty fellow students. The reference group's mean performance scores were identical but the reference estimate scores were systematically lower. As a result, the average discrepancy scores of the subjects were significantly lowered to conform to the reference group standard. Hilgard, Sait, and Margaret (28) gave their subjects a successive subtraction test. The subjects, divided into groups of three to six members, were asked to make private estimations of the time they required after being told the average performance of the other group members. The first three questions were identical but questions of differing difficulty were given to group members

following the first set. Subjects who received easy questions conformed to the group average even though they had performed better, and subjects who had performed poorly because of difficult questions continued to set level of aspirations which conformed to the group average. Similarly, Anderson and Brandt (1) found that fifth grade children tended to converge on the average class score. High achievers lowered their levels of aspiration and low achievers raised their estimates toward the average class level.

In summary, the standards of one's own group tend to have a normative effect upon the level of aspiration set. Individuals tend to set levels of aspiration which closely approximate the average performance of their own group.

Public-Private Setting: The situation in which an individual states a level of aspiration has varied considerably from one study to another. In some studies the individual reports a level of aspiration to an experimenter before a group of his peers. In other studies, the experimenter has been the only person present when the subject estimates his future performance level.

Stotland and Zander (50) state that individuals will try to avoid the loss of self-esteem in the level of aspiration situation. Persons who fail tend to become sensitive to the opinions of others and failure in front of others is harder to rationalize.

Mischel (40) investigated the effect which a negative reinforcement had upon the relationship between the public-private nature of the level of aspiration situation and the level of aspiration set. Mischel found that subjects who stated their level of aspiration in a private situation lowered their estimates significantly more than those who stated their level of aspiration in a public face to face situation.

Holt (30) suggests that the ego is involved to a greater degree in the public situation. When ego-involvement is minimal, levels of aspiration have little motivational significance and are primarily rational judgments. However, when ego-involvement passes a certain limit, defensive considerations become salient and the level of aspiration is more complexly determined. Hanawalt, Hamilton, and Morris (23), for example, asked twenty leaders and twenty nonleaders to state goals privately after stating them publicly. The nonleaders generally reported higher goals in the private situation than they had in the public.

Generally, individuals become more ego-involved in the level of aspiration situation when they are required to report their estimates to others. Individuals are also less likely to lower levels of aspiration after failure in the public situation because of a greater commitment to the first estimate.

VI. THE INSTRUCTIONAL VARIABLE

The standard technique for eliciting level of

aspiration calls for the individual to make some type of statement about their future performance. In early studies of the level of aspiration various types of instructions were employed to elicit this statement. A number of investigators asked subjects what score they expected or actually thought they would make. Growing sophistication in the theoretical analysis of the inner psychological structure of the level of aspiration coupled with conflicting results of several studies led to the hypothesis that the type of instructions used would have a significant effect upon the nature of the level of aspiration elicited.

Gould (22) stated that individuals can interpret the statement, "What will you do next time," in three ways. First, they can take it to mean the minimum score which they would undertake to better. Second, they could set level of aspiration at the maximum which they would hope to come close to. Finally, they could set level of aspiration at the average performance. Hence, a single instruction can elicit a wide range of interpretations.

Irwin and Mitzner (33) found that different types of instructions would produce significant differences in the level of aspirations set. They asked one group what score they hoped to make and a second group what score they expected to make. Subjects who received the "expect" instruction set level of aspiration slightly higher than the level of previous performance while subjects who received a "hope" instruction set higher levels with the mean

discrepancy scores significantly higher than those of the "expect" instruction group at $P = .01$.

Preston and Bayton (43) compared three types of instructions designed to respectively elicit maximum, expected, and least levels of aspiration, the least level being the score beneath which the subject is sure he will not fall. They obtained a high correlation between maximum and expected levels, but a low correlation between the least and the other two levels and concluded that the least level may arise from a different psychological source than the maximum and expected levels.

Lewin (37) placed the various types of instructions on a reality-irreality continuum. He defined a realistic level of aspiration as one which is partly based on the previous performance. Lewin (37) found that "expect" instructions produced a more realistic level of aspiration which would fluctuate with changes in subsequent performance. "Hope" instructions produced significantly larger discrepancy scores which were not as responsive to performance changes. Festinger (13) confirmed the hypothesis that "expect" instructions produced more flexible levels of aspiration and that subjects who set levels of aspiration according to "hope" instructions were less likely to lower level of aspiration following failure.

Irwin (32) states that levels of aspiration elicited by "expect" instructions were based on the individual's appraisal of his ability to meet the demands of

the situation. Levels of aspiration elicited by "hope" instructions were more likely to be based on the wishes, hopes, and fears of the individual. Ricciuti and Schultz (44) add that "hope" instructions produced a greater range of individual differences.

Weiss (51) compared the levels of aspiration evoked by ten types of instructions on a verbal reasoning test of forty items. He found a high correlation between the three "expect" questions but much lower correlations between hope, intend, like, and try questions.

In summary, the type of instruction used can significantly affect the reality of the level of aspiration set and hence must be considered an important methodological variable. In general, "expect" instructions tend to elicit levels of aspiration which are based on the subject's realistic appraisal of his ability and his desire to achieve. "Hope" instructions tend to elicit levels of aspiration which are related to the subject's ideal goals, wishes, and fears.

Gardner (20) warns that the instructional variable should raise not only methodological, but also moral concerns. He suggested that, in real life, every effort be made to keep goals realistic and attainable. Unrealistic goals expose people to undue failure and discouragement. Gardner (20) adds that a background of success experiences in education makes the learning situation more realistic and enjoyable.

VII. LEVEL OF ASPIRATION AND PERFORMANCE

The central concern of this study is whether stating a level of aspiration has an influence upon performance.

Kausler (35) divided his subjects into three groups. A control group took part in an arithmetic test without expressing a level of aspiration. One experimental group was asked to state a level of aspiration before performing the test and a second experimental group received knowledge of the average score of the other experimental group before stating level of aspiration. Kausler found that the mean performance scores of the two experimental groups who expressed levels of aspiration were significantly higher than the mean performance score of the control group. The control group in Kausler's study had not received knowledge of results.

Fryer (18) investigated the effects which level of aspiration had when used as a training procedure in the learning of morse code. He found that the pooled mean performance scores of the groups exposed to the level of aspiration procedures were significantly greater than the mean performance scores of the groups who did not express levels of aspiration while taking part in the training procedure.

Lockette (38) (as reported in Fryer (18)) also found that stating level of aspiration had a significant effect upon performance and that realistic levels of aspiration

evoked by "expect" instructions are more effective than unrealistic goals evoked by "hope" instructions. Horwitz et al (31) further suggest that unrealistic goals can result in a loss of contact with the learning situation and hence, slower improvement in the task. Yacorzynski (52) adds that unrealistic levels of aspiration are not related to increased motivation and that "expect" instructions were superior to "hope" instructions in terms of subsequent performance.

Zander and Curtis (53) found that an experimenter with referent social power over his subjects can influence the subjects to set and internalize levels of aspiration which the experimenter urges them to. An experimenter was said to possess referent social power when the subjects wished to be similar to the experimenter, and coercive social power when the experimenter had the power to punish the subject. Zander and Curtis found that subjects in a referent relationship will set the level of aspiration according to the levels originating from the experimenter and will work to obtain those levels. Subjects in a coercive relationship will resist that influence and refuse to internalize the levels they set as their own. Using the Rotter Board as the task, they found that the referent group had significantly higher performance scores than the coercive group and a control group who did not set levels of aspiration. They attributed this difference to heightened motivation.

Cognitive Dissonance and Commitment: Festinger (14) states

that a psychological tension will arise when two cognitive elements are dissonant; that is, one belief implies the obverse of the other. Cognitive dissonance is psychologically uncomfortable and individuals will seek to reduce dissonance and achieve consonance. Cohen (8) states that dissonance may be reduced by, "decreasing the number or importance, or both, of dissonant elements compared to consonant elements.

Stating a level of aspiration may be viewed as a potentially dissonance producing situation. The individual is asked to state a goal for a performance and is faced with the knowledge that he may suffer loss of respect and hence self-esteem if he fails to achieve that goal. According to Brehm and Cohen (4), the act of commitment aids in the specification of the psychological implications of a choice. It is suggested here that explicitly committing oneself to a goal, coupled with the knowledge that failure to achieve this goal would threaten self-esteem, would lead to a heightened motivation to achieve. It is also suggested that an "expect" instruction would produce a greater need to achieve and avoid dissonance because of the greater commitment to the level of aspiration set. A "hope" instruction is more likely to evoke an unrealistic level of aspiration which the subject would feel no real commitment to. On the other hand, subjects who receive an encouragement instruction will also feel a greater commitment to the level of aspiration set and a greater need to succeed.

In summary, stating the level of aspiration seems

to have a motivational effect upon the subsequent performance. The literature has not clearly demonstrated the superiority of "expect" or "hope" instructions.

CHAPTER III

METHODS AND PROCEDURES

The Subjects

The final sample consisted of the seventy-two male high school students who attended the Gimli Provincial Leadership Training Camp in July, 1969.

The Gimli Provincial Leadership Training Centre, a modern fully equipped facility, is located sixty miles north of Winnipeg, Manitoba on Lake Winnipeg.

Each July, the Community Recreation Branch of the Manitoba Government conducts a two week leadership training camp for selected high school boys followed by a similar camp for high school girls. These camps are designed to train youth in leadership and sports skills so that they might use these skills to assist in school and community recreation programs in a leadership capacity.

Because the campers were selected to attend the camp by school physical education instructors or by recreation agencies, they cannot be considered as a representative sample of high school youth, but rather as representative of the student leader-athlete. However, a wide range of individual differences existed between the subjects.

The entire camper population was used as the study

sample.

The camp situation offered the opportunity of conducting a controlled experiment in a field setting. The experimenter, as a member of the camp staff, was able to establish a referent social relationship with the subjects not unlike the relationship which exists between student and teacher, athlete and coach. The subjects looked upon the testing as a part of the normal camp routine.

The Task

The task employed in the study was the one minute speed sit-up test as specified in the C.A.H.P.E.R. Fitness-Performance Test Manual (5). Required equipment consists of a gym mat and a stop watch.

The subjects assumed a back-lying position with the knees bent and the feet flat on the floor. The experimenter controlled this basic position kneeling in front of the subject straddling the subject's feet. The experimenter maintained the bentleg position by placing his hands on the subject's calves just below the knee thus preventing sliding.

The subject interlaced his fingers behind his head and on a signal to begin, the subject sits up and touches both elbows to his knees. The subject then returns to the starting position, although only the return of the shoulders is required before the next sit-up is begun.

The experimenter counted out the number of sit-ups as they were performed and also informed the subject when thirty seconds and fifteen seconds remained in the minute.

The total score was the number of sit-ups completed in one minute.

According to Cratty (9) the effects of motivation upon performance are greatest in tasks which require an intense and a sustained effort. The one minute speed sit-up test satisfied both these requirements; it demanded an intense, in fact maximal effort, which is sustained over one minute. The task was also selected because it was felt that it could be more easily controlled than other tasks which call for an intense, sustained effort. The size of the performance scores also made the data amenable to statistical analysis.

Experimental Design

The experimental design was a randomized block design (4 x 2) constructed so that the results could be treated with a two-way analysis of variance with repeated measures on one variable.

The subjects were randomly assigned to four groups of eighteen subjects each. The groups were designated as: A. Hope, B. Encouragement, C. Expect, and D. Control. Each subject was tested twice, at the same time of day with a one day interval between testings.

TABLE I

EXPERIMENTAL DESIGN

Groups	TRIALS	
	Session 1	Session 2
A. Hope		
B. Encouragement		
C. Expect		
D. Control		

Procedure

A cover story was used to disguise the true nature of the experiment and to avoid suspicions of manipulative intent by the subjects. On the second night of the camp, the subjects were informed that they were to take part in a survey measuring the abdominal strength of the campers as a group. They were told that their scores would be compared to the scores of other groups.

A testing schedule was constructed so that each subject's name appeared twice, at the same time, and with a one day interval between testings. Testing was done in three time periods each day and over a ten day period. Subject testing was arranged so that equal numbers of each group were tested in each time slot and in each section of the ten day period. This was done to eliminate the possible influence of time of day or number of days spent at camp upon performance.

The testing schedule was placed outside of the testing room and subjects were reminded of their testing sessions at the morning meal. Session 1: The subjects entered the test room individually, the experimenter being the only other individual present when the testing took place. The test was explained to the subject who then performed the test. An audible count was used and the experimenter informed the subject when thirty seconds and fifteen seconds remained in order to provide clear knowledge of results. At the end of the test the subject's score was recorded and the subject was requested not to tell other subjects the number of sit-ups he made. It was explained that knowledge of his results might effect the results of others; the step was actually taken to restrict intersubject communication and to rule out the possible influences of reference group scores.

Session 2: The subjects returned to the test room in the same time slot two days later. Instructions according to groups were as follows.

A. Hope Group: Subjects were told, "Two days ago you were able to do ____ sit-ups in one minute. How many sit-ups do you hope to be able to do today in one minute?"

The subject's level of aspiration was recorded and the test re-performed. At the end of the test the subject was asked, "Out of curiosity, how many sit-ups would you hope to be able to do if you were to do the same test two days from now?"

B. Encouragement Group: Subjects were told, "Two days ago you were able to do _____ sit-ups in one minute. I think that you are capable of doing several more if you apply yourself. How many sit-ups do you think you will be able to do in one minute today?"

The subject's level of aspiration was recorded and the test re-performed. At the end of the test, the subject was asked, "Out of curiosity, how many sit-ups do you think you would be able to do if you were to do the same test two days from now?"

C. Expect Group: Subjects were told, "Two days ago you were able to do _____ sit-ups in one minute. How many sit-ups do you expect to be able to do in one minute today?"

The level of aspiration was recorded, the test was performed, and the subject was asked to re-set level of aspiration according to an expect instruction.

D. Control Group: The subjects were told of their previous score and were asked to perform the test again.

The subjects in all four groups were again asked not to tell other campers of the scores they had made.

Possible effects of time of day of testing upon performance were experimentally ruled out by the testing schedule; equal numbers of each group were placed in each time slot.

After the testing was completed, the experimenter revealed the true nature of the study, the purpose of the study, and a preliminary indication of the results to the

subjects. The subjects were asked whether they had become suspicious of the true nature of the study. Most subjects stated they felt that the test was to be used to compare them as a group to national norms. Further questioning revealed that very little inter-subject discussion of the tests had taken place.

CHAPTER IV

RESULTS AND DISCUSSION

Introduction

Utilizing four groups designated as A. Hope, B. Encouragement, C. Expect, and D. Control, the following hypotheses were tested in this study:

(1) The mean performance scores of the groups which state a level of aspiration will be significantly greater than the control group which has knowledge of results alone.

(2) The mean performance scores of the groups receiving expect and encouragement instructions will be significantly greater than the mean performance scores of the group receiving hope instructions.

(3) The mean goal discrepancy scores of the groups exposed to hope and encouragement instructions will be greater than the mean goal discrepancy scores of the group exposed to expect instructions.

(4) The levels of aspiration set by those groups receiving hope and encouragement instructions will be influenced less by subsequent task performance than the levels of aspiration set by the group receiving expect instructions.

Two types of data were collected in the study.

These were:

A. Performance Scores

B. Level of Aspiration and Discrepancy Scores

A. Performance Scores: The performance scores were defined as the number of sit-ups accomplished in one minute. Two performance scores were obtained from each subject and were designated as pre-test and post-test scores. The performance scores were the main dependent variable of the study and were utilized to test the first two hypotheses. Initially, a two-way analysis of variance with repeated measures on one variable was applied to the data. Upon obtaining a significant interaction effect, the data was further analyzed for its simple effects. Correlated t tests and one-way analysis of variance tests were applied to pre-and post-test data.

B. Level of Aspiration and Discrepancy Scores: The level of aspiration scores were operationally defined as the predicted scores for the subsequent performance while the discrepancy score is defined as the difference between the level of aspiration set and the level of the performance which preceeded it. The discrepancy scores were used to test the third and forth hypotheses. A one-way analysis of variance was used to test whether significant differences existed between the mean goal discrepancy scores of the three groups that set levels of aspiration.

Finally, some measure of the flexibility of the various levels of aspiration set was obtained by calculating percentages of upward or downward shifts in level of aspiration following success and failure.

I. RESULTS

A. PERFORMANCE SCORES

Pre-test Scores

Table II presents the pre-test means and standard deviations for each of the four groups.

TABLE II
MEANS AND STANDARD DEVIATIONS OF THE
PRE-TEST SCORES OF THE FOUR GROUPS

Group	Mean	Standard Deviation
A. Hope	43.11	9.48
B. Encouragement	44.33	6.87
C. Expect	41.11	9.91
D. Control	42.28	8.41

Post-test Scores

Table III presents the post-test means and standard deviations for each of the four assigned groups.

TABLE III
MEANS AND STANDARD DEVIATIONS OF THE
POST-TEST SCORES OF THE FOUR GROUPS

Group	Mean	Standard Deviation	Improvement over Pre-test
A. Hope	47.28	8.87	4.17
B. Encouragement	49.17	8.08	4.84

Group	Mean	Standard Deviation	Improvement over Pre-test
C. Expect	45.94	8.37	4.83
D. Control	41.11	9.76	-1.17

Initially a two-way analysis of variance with repeated measures on one variable was performed using pre-test and post-test scores as the repeated variable. The results are found in Table IV.

TABLE IV
SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE
OF PRE AND POST-TEST PERFORMANCE SCORES

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F
Between				
A	511.175	3	170.3916	1.212
	9556.0	68	140.529	
Within				
B	361.425	1	361.425	33.575 **
AB	227.575	3	75.858	7.0469**
	732	68	10.765	

*p < .05
**p < .01

Because of the significant interaction or AB effect, the data was further analyzed according to its simple effects.

A significant within or B effect was also established.

The pre-test scores were subjected to a one-way analysis of variance to establish whether any significant differences existed initially between the four groups. The results are shown in Table V.

TABLE V
SUMMARY OF THE ANALYSIS OF VARIANCE
OF THE PRE-TEST MEANS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F
Between Groups	99.0	3	33.0	.4466
Within Groups	5024	68	73.88	
Total	5123	71		

*p < .05

Clearly, no significant differences existed between the pre-test means of the four groups at $p < .05$.

The post-test scores were also subjected to a one-way analysis of variance to establish whether any significant differences, attributable to stating level of aspiration, existed between the four group means. A summary of the results is found in Table VI.

TABLE VI
SUMMARY OF THE ANALYSIS OF VARIANCE
OF THE POST-TEST MEANS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F
Between Groups	638.865	3	212.955	2.75*
Within Groups	5265.01	68	74.42	
Total	5903.875	71		

*p < .05

The obtained F of 2.75 was significant at $p < .05$. A Duncan's New Multiple Range Test was performed to compare means two at a time for actual significant differences. A summary of the results is found in Table VII

TABLE VII
DUNCAN'S NEW MULTIPLE RANGE TEST APPLIED TO
THE DIFFERENCE BETWEEN THE POST-TEST MEAN SCORES

Means	D	C	A	B	Shortest Sign. Range
	41.11	45.94	47.28	49.17	$\alpha = .05$
D 41.11		4.833	6.166	8.056*	$R_2 = 5.867$
C 45.94			1.333	3.223	$R_3 = 6.1719$
A 47.28				1.890	$R_4 = 6.3730$
B 49.17					

*p < .05

The only significant difference existed between Group B, the encouragement group, and Group D, the control group. The difference between Groups A and D was also extremely close to being significant at $p < .05$.

No significant differences existed between the three experimental groups.

The power of the one-way analysis of variance was certainly diminished by initial, but not significant, differences in the four group's pre-test means.

The three experimental groups A, B, and C made mean improvements of 4.17, 4.84, and 4.83 respectively while the control group D actually showed a mean loss in performance of -1.17.

The loss in performance in the control group may likely be attributed to sore muscles caused by the rigor of the camp routine. A large number of subjects in all groups registered this complaint.

The loss in performance scores was not expected; rather, it was felt that this group would also produce a slight improvement because of the subject's desire to improve over his previous score. It is likely that sore muscles, due to unaccustomed amounts of exercise, also had a similar effect upon the post-test performance means of the experimental groups, thus diminishing the motivational effects of goal-setting to a degree.

Correlated t tests were also performed to establish whether significant differences existed between pre-test and

post-test means for each group. The results are shown in Table VIII.

TABLE VIII
CORRELATED T TESTS OF THE DIFFERENCE
BETWEEN PRE-AND POST-TEST MEAN
SCORES FOR EACH GROUP

Group	Pre-test Mean	Post-test Mean	t	Signifi- cant
A. Hope	43.11	47.277	6.149	**
B. Encouragement	44.33	49.167	4.529	**
C. Expect	41.11	45.944	4.609	**
D. Control	42.271	41.111	.0076	

*p < .05

**p < .01

Significant differences existed between the pre-and the post-test means of the three groups which set levels of aspiration at $p < .01$. No significant differences existed between the pre-and post-test means of the control group, however.

The use of multiple t tests compounds the error terms. The high degree of significance of the differences between the pre-and post-test means of the experimental groups, however, clearly demonstrates that the independent variable produced an effect. No significant differences between the control group's pre-and post-test means makes the differences in the experimental groups more attributable

to the effects of setting level of aspiration.

B. LEVEL OF ASPIRATION AND DISCREPANCY SCORES

The three experimental groups set levels of aspiration before the second performance of the sit-up test and re-set level of aspiration immediately following the test. The mean level of aspiration and mean discrepancy scores were calculated for each of the three groups.

Levels of Aspiration

Table IX presents the means of the levels of aspiration for each of the three groups.

TABLE IX
MEANS OF THE LEVELS OF
ASPIRATION OF THE THREE GROUPS

<u>Group</u>	<u>Mean</u>
A. Hope	46.77
B. Encouragement	49.99
C. Expect	43.77

Discrepancy Scores

The mean discrepancy or D scores for each of the three experimental groups are presented in Table X.

TABLE X
MEANS OF THE DISCREPANCY
SCORES FOR THE THREE GROUPS

<u>Group</u>	<u>Mean</u>
A. Hope	3.66
B. Encouragement	5.66
C. Expect	2.66

The third experimental hypothesis stated that the mean goal discrepancy scores of the groups exposed to hope and encouragement instructions would be greater than the mean goal discrepancy score of the group exposed to expect instructions. A one-way analysis of variance was used to determine whether significant differences existed between the mean goal discrepancy scores. A summary of the results is found in Table XI.

TABLE XI
SUMMARY OF THE ANALYSIS OF VARIANCE OF
THE MEAN GOAL DISCREPANCY
SCORES OF THE THREE GROUPS

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>Degrees of Freedom</u>	<u>Mean Square</u>	<u>F</u>
Between Groups	82.66	2	41.33	2.565
Within Groups	821.34	51	16.11	
Total	904	53		

*p < .05

The F of 2.565 was not significant at $p < .05$.

The hypothesized differences, although not significant, did exist. The Hope and Encouragement Groups set higher levels of aspiration than did the Expect Group.

Flexibility Data

The fourth hypothesis stated that the levels of aspiration set by those groups receiving hope and encouragement instructions will be influenced less by subsequent task performance than those set by the group receiving expect instructions. Feelings of success or failure were measured by having the subject re-set the level of aspiration after the second performance. Percentages of upward and downward shifts after success and failure were calculated. Table XII presents the shifts following success in the three groups.

TABLE XII
THE DIRECTION OF SHIFTS FOLLOWING
SUCCESS IN THE THREE GROUPS

Group	Upward Shift	No Shift	Downward Shift	Number of Successes
A. Hope	100%			9
B. Encouragement	100%			10
C. Expect	75%	18.75%	6.25%	16

Table XIII presents the shifts following failure in the three groups. Failure was defined as failing to attain the level of aspiration in the subsequent performance.

TABLE XIII
THE DIRECTION OF SHIFTS FOLLOWING
FAILURE IN THE THREE GROUPS

Group	Upward Shift	No Shift	Downward Shift	Number of Failures
A. Hope	55.6%	22.2%	22.2%	9
B. Encouragement	25%	37.5%	37.5%	8
C. Expect		50%	50%	2

Generally, subjects followed the "Laws of Shifting" and raised the level of aspiration after success. Failure to meet aspired level of performance produced more varied results; subjects almost equally raised, remained at the same level, or lowered level of aspiration.

Analysis of the flexibility data tends to confirm the fourth hypothesis that subjects who set level of aspiration according to expect instructions are more responsive to subsequent performance in re-setting level of aspirations than subjects who received hope or encouragement instructions. Any conclusions must, however, be considered in the light of the small number of observations upon which they were based.

II. DISCUSSION

A. Performance Scores

Analysis of the data supports, to a large degree, the first hypothesis which states that the setting of a level of aspiration will have a positive effect upon performance. The three experimental groups, A, B, and C, made respective mean performance increases of 4.17, 4.84, and 4.83, while the control group, Group D, actually showed a slight mean decrease in performance of -1.17.

It is felt that the decrease in performance of the control group was due to large and unaccustomed amounts of exercise which resulted in sore muscles. A number of subjects, in all groups, complained of sore abdominal muscles and informed the experimenter that they felt this would be detrimental to performance. All subjects were exposed to the identical camp routine, so it is likely that any adverse effects of sore muscles would be a constant in the study.

Correlated t tests revealed that significant differences existed between the pre and post-test means of the Hope, Encouragement, and Expect Groups at $p < .01$. No significant differences existed between the pre and post-test means of the Control Group. The correlated t tests and one-way analysis of variance tests for both pre and post-test means were used after a significant AB or interaction effect was obtained with the initial use of a two-way analysis of variance with repeated measures on one variable.

The one-way analysis of variance of the pre-test means demonstrated that no significant differences were present between the four groups. An analysis of variance of the four post-test means revealed significant differences between means at $p < .05$. The F ratio obtained was very close to being insignificant and the Duncan's New Multiple Range Test revealed that the only difference between pairs of means that was significant was between the Encouragement and the Control Group. The differences between the other two experimental groups, A and C, and the Control Group were also high but not significant.

Generally, however, the results of the correlated t tests confirm the first hypothesis that setting a level of aspiration has a positive effect upon performance.

The second hypothesis stated that setting a level of aspiration according to expect and encouragement instructions would have a greater effect upon performance than setting a level of aspiration according to hope instructions. The mean improvements of the Encouragement and Expect Groups were, at 4.84 and 4.83 respectively, slightly larger than the mean improvement of 4.17 sit-ups of the Hope Groups. The differences were not significant, hence, the second hypothesis was not confirmed. Failure to obtain significant results was likely due to small sample size and monitoring problems with the instructions.

B. Level of Aspiration Scores

The third hypothesis stated that the Hope and

Encouragement Groups would set higher levels of aspiration than the Expect Group. A one-way analysis of variance of the differences between the mean discrepancy scores of the three groups failed to confirm the hypothesis. The mean discrepancy scores of the Hope and Encouragement Groups were, at 3.66 and 5.66 respectively, larger but no significantly larger than the mean discrepancy score of 2.66 for the Expect Group. The fact that the mean discrepancy score of the Hope Group was considerably larger than the mean discrepancy score of the Expect Group does suggest that subjects may be encouraged to set higher levels of aspiration than they ordinarily would.

The levels of aspiration set by the Hope and Encouragement Groups were less responsive to subsequent performance than the levels of aspiration set by the Expect Group in this study. Any statement confirming the fourth hypothesis is limited by the small number of cases which the conclusion was based on.

The results confirmed the findings of Jucknat (34), Festinger (13), and others (19), (1), (28), and (7) that success generally leads to a moderate raise in level of aspiration while failure may lead to a lowering of level of aspiration. The effects of failure on level of aspiration were more varied than the effects of success. Of the thirty-five subjects who succeeded to attain the projected level of aspiration on the subsequent performance, all but three raised the level of aspiration in response to success.

Of the nineteen subjects who failed to attain the aspired level of performance seven raised level of aspiration, six retained the same level of aspiration, and six lowered the level of aspiration.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to determine the effects which explicitly stating a level of aspiration according to hope, encouragement, and expect instructions has upon performance of a selected motor task.

Seventy-two male high school subjects, the entire camp population at the Gimli Provincial Leadership Training Centre, were randomly assigned to four groups designated as A. Hope, B. Encouragement, C. Expect, and D. Control. All subjects were assigned time slots on a testing schedule in such a way that equal numbers of all groups were tested in the same time slot.

Each subject was given a pre-test of the one minute speed sit-up test. The task was chosen because it was felt that motivational effects would be greatest upon a task calling for an intense and sustained effort. Two days after the pre-test and in the same time slot, the subject was tested again. Before performing the task, the Hope, Encouragement, and Expect Groups were informed of the results of their last test and were asked to set a level of aspiration according to the instruction specific to the group. The Control Group was also informed of post results, but

did not set levels of aspiration before performing the task. The data collected consisted of performance scores and level of aspiration scores.

The performance scores were initially submitted to a two-way analysis of variance. After obtaining a significant AB or interaction effect, the data was further analyzed to test for simple effects. One-way analysis of variances and correlated t tests were performed on the pre and post-test scores.

A one-way analysis of variance was also used to test for significant differences between mean goal discrepancy scores of the three groups which set levels of aspiration. Percentages of shifts following success and failure to reach level of aspiration were calculated to analyze the direction of shifts and the responsiveness of the levels of aspiration set to subsequent performance.

Conclusions

1. The subjects who explicitly stated a level of aspiration performed significantly better after stating level of aspiration: the control subjects, who did not state a level of aspiration, did not make any significant improvement in performance.
2. The type of instruction used did not produce significant differences in performance between the groups which set levels of aspiration.
3. The Hope and Encouragement Groups set higher, but not

significantly higher, levels of aspiration than the Expect Group.

4. It would appear that subjects can be influenced to set higher levels of aspiration than they would ordinarily set for themselves without encouragement.
5. Success in reaching level of aspiration of the subsequent performance generally led to a moderate raising of level of aspiration while failure produced more varied results. Subjects who failed to reach aspired level of performance almost equally raised level of aspiration, remained at the same level, or lowered level of aspiration.
6. Subjects who set levels of aspiration according to expect instructions were slightly more responsive to subsequent performance in re-setting level of aspiration than subjects who set level of aspiration according to hope and encouragement instructions. The validity of the above statement is suspect, however, because of the small number of observations upon which the conclusion was based.

Recommendations

1. It is recommended that physical educators and athletic coaches employ the setting of levels of aspiration as a motivational technique wherever it is felt that goal-setting would be profitable and practical to employ. It appears that setting a level of aspiration would have the greatest motivational effects upon tasks which call

for an intense and sustained effort. Coaches should encourage athletes to set levels of aspiration which are realistic yet slightly higher than those the athletes might set for themselves.

2. An understanding of the central concepts of level of aspiration would seem to be a profitable line of enquiry for both coaches and physical educators. The professional would gain an understanding not only of the motivational techniques which might be employed, but also the psychological implications which might accompany the use of these techniques. The personal feelings of success and failure which an individual experiences after a task performance are related to the level of aspiration which the individual possessed for that task performance. Encouraging an individual to set and internalize unrealistic levels of aspiration may expose the individual to excess feelings of failure.
3. Further studies of various facets of the construct, level of aspiration, should be carried out. The design of the present study appears to be valuable in determining the effects of setting level of aspiration upon performance. Further studies along these lines should be carried out to determine the effects of goal setting upon other types of motor tasks; for example, tasks involving fine motor skills. A more extensive investigation into the effectiveness of the various reality levels of goals would be valuable.

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APPENDIX

GROUP A: HOPE

Subject Numbers	Initial Performance	Initial Level of Aspiration	Subsequent Performance	Subsequent Level of Aspiration
1	33	30	37	40
6	32	35	38	40
9	31	44	41	48
15	46	46	47	48
16	50	60	54	58
17	57	53	55	55
20	34	40	37	42
23	31	35	37	40
24	39	45	43	47
31	55	60	57	60
35	54	59	57	59
46	42	45	44	48
48	34	34	40	40
51	38	42	41	43
57	52	50	57	58
59	43	48	44	47
63	53	56	61	62
65	53	60	61	62

GROUP B: ENCOURAGEMENT

Subject Number	Initial Performance	Initial Level of Aspiration	Subsequent Performance	Subsequent Level of Aspiration
2	39	45	42	45
3	41	49	49	51
11	45	50	43	40
12	50	59	65	68
13	50	57	57	60
19	44	50	46	50
21	26	30	35	37
25	48	52	60	55
26	36	42	38	43
29	47	56	59	59
37	54	61	55	60
50	54	60	63	65
52	39	50	46	50
55	46	46	47	48
56	50	45	50	50
61	40	53	43	43
70	44	50	50	55
72	45	45	47	47

GROUP C: EXPECT

Subject Number	Initial Performance	Initial Level of Aspiration	Subsequent Performance	Subsequent Level of Aspiration
4	35	35	38	40
5	54	56	56	57
10	53	50	50	50
18	47	47	50	42
22	32	40	37	40
27	31	35	37	37
30	49	57	49	53
32	52	55	60	65
38	27	30	34	35
39	46	46	48	50
40	26	33	43	48
41	50	50	55	56
43	28	28	34	34
58	47	49	53	54
60	48	52	57	60
64	47	45	46	46
66	36	40	40	40
69	32	40	40	40

GROUP D: CONTROL

Subject Number	Initial Performance	Subsequent Performance
1	47	47
8	44	37
14	46	30
28	50	52
33	53	55
34	42	44
36	35	20
42	24	31
44	29	30
45	49	50
47	49	48
49	42	37
53	52	57
54	39	41
62	36	37
67	39	41
68	45	46
71	40	37

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